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Restoration and Loss after Disaster: Applying the Dual Process Model of Coping in Bereavement

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Abstract

The article asks whether disasters that destroy life but leave the material infrastructure relatively intact tend to prompt communal coping focussing on loss, while disasters that destroy significant material infrastructure tend to prompt coping through restoration / re-building. After comparing memorials to New Zealand's Christchurch earthquake and Pike River mine disasters, we outline circumstances in which collective restorative endeavour may be grassroots, organised from above, or manipulated, along with limits to effective restoration. We conclude that bereavement literature may need to take restoration more seriously, while disaster literature may need to take loss more seriously.

Keywords: Communal loss, earthquake, grief, communitas, volunteers

How do communities cope with the mix of grief, trauma, material destruction and re-building that disasters bring? Stroebe and Schut's (1999) dual process model (DPM) of coping with bereavement was initially developed to illuminate the patterning of individual loss; this article asks if it can be scaled up to illuminate communal loss after disaster? In considering this, we hope to foster a conversation between two hitherto somewhat separate literatures – bereavement and disaster. Our approach distinguishes disasters which cause major material losses of home or livelihood from (often man-made) disasters that cause loss of life but leave the material infrastructure relatively intact; we enquire whether this may influence whether communal coping focuses on restoration or on loss. Using online memorials to identify these two foci, we compare two recent but contrasting disasters in New Zealand, before considering some circumstances in which collective restorative endeavour may be spontaneous from the grassroots, organised from above, or manipulated.

The DPM and Communal Loss

Stroebe and Schut's dual process model of bereavement distinguishes loss-orientation (LO), where individuals focus on the loss itself through what traditionally had been called 'grief work', and restoration orientation (RO) addressing "secondary stressors that are also consequences of bereavement, reflecting a struggle to reorient oneself in a changed world without the deceased person" (Stroebe & Schut, 1999, p. 277). Each orientation involves four interconnected coping tasks associated with acceptance, pain, adjustment and moving on. LO

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is often primarily emotional; RO can be more practical and material, striving to replace capabilities, roles and resources once provided by the deceased. The model indicates that oscillation between the two is necessary for effective coping: while confronting the loss is important, so too is engaging in restorative work without which the individual would be overwhelmed by grief. They cite evidence that, so long as neither orientation is entirely eclipsed, a range of personal coping styles can be psychologically effective.

Stroebe and Schut developed the model to describe how individuals cope with bereavement and to understand individual differences in coping, but recently they have shown how it can be extended beyond the individual. They explain that parallel and interconnected LO and RO tasks unfold at the individual *and* the family level where each influences and is influenced by the other (Stroebe & Schut, 2015). Their revised DPM (DPM-R) illuminates tensions in small groups, such as a family, when different members cope differently (Gilbert, 1996). While Stroebe and Schut have not applied the model to collective coping in groups larger than the nuclear family, there is a longstanding sociological/anthropological tradition that sees bereaved individuals simultaneously adjusting to irretrievable loss and repairing social bonds through symbolic communal activities, particularly in the face of disasters (Durkheim, 1912/1995, Erikson, 1976, Marris, 1986). Marris explains collective grieving as conflicting impulses: conservation (looking back) and change (looking forward). These generate tension that, writ large, is projected onto and managed through symbolic ritual behaviour such as official mourning and the making of memorials which help create new collective meanings.

For instance, Robben (2014) applied Stroebe and Schut's model to national mourning after political violence in Chile and Argentina where tens of thousands of citizens were 'disappeared' by the military junta. He showed how at the national level, oscillation between LO and RO is not natural but political. "Understandably, the bereaved will often emphasize LO, whereas perpetrators will propagate RO to leave the past behind for self-serving reasons" (p. 337), though the armed forces later came to accept the prosecution of military perpetrators because this demonstration of accountability enhanced the military's legitimacy. Official recognition of and response to disaster is likewise a vehicle for legitimating some government practices over others (Hayward, 2013; Tironi, Rodriguez-Giralt, & Guggenheim, 2014).

Taking Robben's initiative, Stroebe and Schut's DPM-R could be further extended by adding a societal layer to incorporate individual, inter-personal *and* societal levels; societal tasks would be symbolically-laden communal activities that perform the tasks of both loss and restoration. This paper takes an initial step in investigating if such an extension is viable and fruitful by identifying and examining the presence after disasters of societal LO and RO tasks.

Clearly, not all disasters are the same. There is enormous variation in the mix of loss of life, trauma, destruction of homes, livelihoods and neighbourhoods, subsequent collapse of governments and companies, and the politics of rebuilding. When a disaster causes massive material destruction, many of the stressors are not secondary to bereavement, as stated in the original DPM. Whereas ordinary widowhood can subsequently leave the widow with no home as well as no husband, earthquake or flood can immediately and directly destroy both life and home (Gow, 2013). In disasters, some people may lose and need to rebuild their home but, while knowing of others in their community who have died, may not themselves be grieving the death of a loved one. They may nonetheless be traumatised (Kuntz, Naswall, & Bockett, 2013). Indeed, after earthquake or wartime bombing, trauma—exacerbated by

anxiety about when to start rebuilding—may be on-going as people never know if the most recent aftershock or air-raid is the last or if there are more to come (McLeod, 2011). Thus, within the context of disasters, restoration may oscillate with loss, anxiety and/or trauma.

If, as the DPM indicates, coping entails oscillation between LO and RO, it seems likely that how individuals and communities cope in the aftermath of disaster will be shaped by the relative absence or presence of material destruction. First, absence: ‘non-material’ disasters—school shootings, crowd-crushing, transport accidents, and terrorist acts intended to maximise death and injury—typically result unambiguously from human negligence or violence. Such disasters may entail some material loss, for example of an airplane, train or bus, or may require some modest repair to buildings, but from the community’s perspective it is lives that have been lost and are grieved, along perhaps with the loss of a sense of a safe and ordered world (Friend, 2006). In this situation, we would expect a focus on loss by individuals, communities, politicians and media. Though bereaved individuals will certainly have to re-build their lives, public RO is likely to be limited to governments and companies putting on a public show of ensuring that such a disaster is not repeated.

Second are disasters that may be man-made or natural, and may or may not cause loss of life, but do destroy homes, infrastructure and livelihoods. Modern wars, not least the Second World War, the Vietnam War and the second Iraq War, have entailed major physical destruction to one or more combatant countries. Earthquakes, volcanoes, floods and tsunamis in populated areas may render tens of thousands homeless. In such circumstances, we suggest that the urgent need to find temporary shelter and then the long term project to rebuild entire village and towns will create a collective RO, along with attendant conflicts and politics, marginalising victims and their personal loss.

Contrasting the aftermath in the UK of the two world wars illustrates this difference between non-material and material disasters. World War I killed a very large number of British combatants, but material destruction within Britain was minimal; the aftermath was dominated by (LO) commemoration of those who had died. In World War II, by contrast, loss of life was less but aerial bombing badly damaged British cities; the post-war period was dominated by (RO) re-building the country’s urban and economic fabric, grief was downplayed and new memorials comprised utilitarian contributions to the rebuilding. This post-1945 downplaying of loss is explained by historian David Cannadine (1981) in terms of there being fewer deaths, sacrificed in the cause of a just war, but the DPM indicates that after 1945 restoration had to trump loss if Britain was to rebuild itself.

The questions this article asks therefore twofold. 1) Does the DPM illuminate the aftermath of disaster? 2) How does a disaster’s level of material destruction influence LO versus RO, as reflected in online memorialisation?

METHOD

Two Case Studies

We explore LO and RO through a comparative case study of two disasters on New Zealand’s South Island that were close to each other in both space and time: the 2010-11 Christchurch earthquake and aftershocks, and the 2010 Pike River Mining Disaster. We compare how the two disasters were memorialised online to see when and where LO and RO predominated,

and if this was related to the specific nature of each disaster. We see online memorialisation as symbolic meaning-making, playing out societally orientated LO and RO tasks in the public domain; individuals, many of whom do not know anyone who died yet feel affected by the deaths, participate online in co-creating a public discourse of loss and/or restoration.

When we originally gathered the data, we had wanted to see if and how the type of disaster affects online memorialisation. Does it change who constructs online memorials, how they construct them, and who they are shared with? Does it change *why* they construct them? Only later did we consider the potential relevance of the DPM. So in this article, we use our findings to explore if and how the material scope of each disaster influenced the memorialised oscillations between LO and RO.

The Christchurch earthquakes and the Pike River mine explosion happened within months of one another, so the same digital technology was available after each. The second earthquake caused extensive damage across Christchurch, rendering almost every building in the central business district unusable, damaging thousands of suburban homes, and affecting key services such as roads, electricity, drinking water and waste systems. The mine explosion was a more isolated disaster; key services were not affected, other than the closing of the mine and another mine in the area some time later.

The Christchurch earthquakes. At 4.35 a.m. on Saturday 4 September 2010, a magnitude 7.1 earthquake struck near the rural town of Darfield, 40 km west of Christchurch, at a depth of 11km (Christchurch City Libraries, 2014). It was the largest earthquake to hit a major urban area in New Zealand since the 1931 Hawke's Bay quake (McSaveney, 2013). For the first time in New Zealand, social media played a big part in the aftermath of an earthquake; Facebook and Twitter were used to circulate GeoNet reports, as well as for residents to report aftershocks within seconds of their occurrence (McSaveney, 2013).

Five months later, at 12.51 p.m. on Tuesday 22 February 2011, a magnitude 6.3 earthquake struck 10km south-east of Christchurch at a depth of 5km (Christchurch City Libraries, 2014). Widely considered an aftershock of the Darfield Earthquake, ground acceleration in the city was three to four times greater than in the original earthquake (McSaveney, 2014). Along with major damage to land, buildings, and infrastructure, 185 people lost their lives. Most died not at home but in the central business area, including 115 in the Canterbury Television (CTV) building which housed a TV station, a medical clinic and an English language school (Potter, Becker, Johnston, & Rossiter, 2014).

The Pike River mine explosion. At 3.45 p.m. on Friday 19 November, 2010, a large methane explosion in the Pike River Mine, 45km north-east of Greymouth on the South Island's West Coast, killed 29 miners. Two more who were in a passageway intersecting with the surface survived. The Chief Coroner found that the 29 died "at the immediate time of the explosion ... or a very short time thereafter" from the force of the explosion or the irrespirable atmosphere (Royal Commission on the Pike River Coal Mine Tragedy, 2012, p. 24).

The two disasters had vastly different effects not only on their immediate communities, but also how they were understood and addressed around both New Zealand and the wider world. The Christchurch earthquakes caused widespread damage, impacting vital municipal services across the city. The Pike River mine explosion killed fewer people, but the death toll in this small close-knit town was proportionately higher. How these disasters were memorialised reflects these differences. While both disasters received official and unofficial physical and digital memorials, we focus on digital memorials.

Data Collection

With search terms such as Christchurch, Earthquake, Pike River, mine, memorial, tribute, RIP, online, and website, we used Google and CEISMIC to find digital memorials to the two disasters. CEISMIC is a digital archive linking to material related to the Christchurch Earthquakes which led us to several relevant blogs, though was otherwise of limited use as it led largely to information about offline phenomena (such as physical memorials). Given the power of search engines and the bounded nature of the disasters, we are confident we have identified all online memorials, both to individuals killed in each disaster and to collective memorials.

Data Sorting and Analysis

Data was archived using EndNote X7. Information recorded was the page title, website where it was published, URL, and an overview of the page. We then sorted the data using keywords: Earthquake, Pike River, Bodies, Memorials, Accountability, Rebuild, Anniversary, Personal Mourning, and Social Mourning. Each datum was sorted as public or semi-public, and personal or communal. *Semi-public* memorials include Facebook profiles belonging to individuals and personal groups requiring the viewer to log into their website—a very slight degree of privacy. We did not ask for permission to access and did not use memorials hidden behind further privacy walls put in place by their owners. The memorials were also classified as either personal or communal. *Personal* memorials are those dedicated to an individual victim, with comments left about or for that person whereas *communal* memorials memorialise the victims as a whole, or the event; for example, memorialising what the city of Christchurch has lost beyond its citizens. Drawing on the DPM-R, stressors were identified within the memorial pages' text. Initially expecting to see stressors such as bodies, memorials, and accountability, we identified further stressors, specifically anniversaries and the rebuild.

The frequency distribution of types of memorialisation was calculated to identify the different weight the online memorials gave to the different stressors. While the research population was small and we aimed to identify patterns rather than test any hypothesis, we did calculate chi-square for statistically significant differences between the two sites. The results presented indicate likely patterns of memorialisation.

Authenticity

We cannot be sure that the people who write the online comments are who they claim to be (e.g., family members of the deceased). Whilst there was no apparent reason to question the authenticity of the commenter's identity, we did discover Christchurch earthquake memorial pages to three people who not only did *not* die in the earthquake, but never actually existed. Familiarity with victims' names enabled us to question the authenticity of three pages for a father, mother, and daughter; there was no such combination of deaths in the earthquake (New Zealand Police, 2014). Using Google's reverse image search, the photos of the three 'decedents' were traced back to elsewhere on the internet to unrelated news articles, proving the pages were false; they were not included in the analysis. While we bore potential inauthenticity in mind when reading comments from supposed family members or close friends, it is impossible to ascertain complete veracity of identity. The question of authenticity is relevant to any open-source online research; fictitious posts need to be acknowledged as a possibly under-reported phenomenon within memorialisation.

Ethics

Our university ethics guidelines do not require ethical approval to gather data already in the public domain. We made no attempt to access private content through, for example, contacting the page owner. To illustrate societal coping, the article includes a few quotes from online comments in the public domain which we believe do not invade anyone's right to privacy.

FINDINGS

In analysing the online memorials, it became clear that a disaster's material scope influences its online memorialisation. In both cases, there were plenty of standard mourning comments, such as 'Rest in Peace' and 'Missing You' but additional comments focused on different things in the two disasters. The earthquake memorials emphasised anniversaries, the bodies of victims, and the rebuild, while the Pike River memorials focused on the bodies of victims and criminal liability for the disaster. Earthquake memorials endeavoured to memorialise and mourn the city, whereas Pike River memorials were all about the men lost in the mine. Another difference is that physical memorials were not mentioned in the online Pike River memorials. We argue that this is largely because there was a clear precedent for how mining disasters are physically memorialised in the area; there were already certain places for memorials to be established and there was no question of who goes on the memorial. A sense of the men joining an existing community of dead miners resonates with the LO task of relocating the deceased within a new social context. One Facebook page not attached to any family/friends of the deceased shared photos of each of the miners in a photo folder called 'The Men' and captioned each image with the same comment and the miner's name: 'rip [name], forever on the late shift'. In Christchurch, by contrast, debate raged on RO issues such as whether damaged existing memorials and the badly damaged Cathedral should be saved from demolition: 'Like the Bridge of Remembrance, the Ballantynes Memorial Rose Garden represents an event which shaped Christchurch as a city. It is important these memorials endure because they will help future generations of citizens understand our past'; 'It's time to let it (the cathedral) go, and to let the Church get on with creating something positive in the heart of our city'; 'Christchurch Cathedral is an anchor for the community. It has something that hundreds of thousands of Cantabrians have grown up with and looked to as one of their community's defining features.'

Table 1 here

With alpha set at 0.1, a contingency table analysis of type of memorialisation (personal or communal) for each disaster revealed a significant association between these two variables, $(1, N = 69) = 3.14, p = 0.10$ (see Table 1). Online memorials for the Pike River mine explosion were primarily communal. They paid tribute to the event and to the 29 miners *as a group*, as opposed to individual pages. Online memorials for the Christchurch earthquakes were primarily personal; only around a third commemorated the event or the victims together. It may be that victims of Pike River are mourned as a group because they all died as a group and their remains will most likely remain together for many years to come, if not forever. The Grey district is quite small and close knit, which could also play a part in memorialising them as a group—coalmining is a collective endeavour in which each miner relies on each other, and coalmining communities often have a strong sense of solidarity: 'We live today to acknowledge another, A Father, A Son, An Uncle, a Brother, A Nephew,

Grandad a friend and so much more. We farewell our 29 Coal Miners, So Cherished and Adored'. By contrast, there were more personal memorials for earthquake victims: 'A first xmas without you. You were with us on the day in our hearts 4 eva.'; 'two years ago you where taken from our life by a horrible mother nature accident'; 'YESTERDAY WAS YOUR 19TH BIRTHDAY'.

Table 2 here

A contingency table analysis of memorialisation content for each disaster revealed a significant association between these two variables, $(1, N = 69) = 21.87, p = .005$ (see Table 2). Memorialisation content for the Pike River mine explosion most commonly focused on bodies, including their retrieval and laying to rest. Somewhat less frequently mentioned were accountability and anniversaries; there was very little discussion of rebuilding the mine. Memorial pages for the Christchurch earthquake revealed three major themes: anniversaries, bodies and the rebuild. Mention of physical memorials was apparent, though not prevalent. There was very little discussion of accountability.

Pike River memorials focused on the bodies because their recovery was a major struggle in the years succeeding the explosion. There was considerable discussion of accountability, given that the legal action against the Pike River management has not satisfied the community (Macfie, 2013). Pike River memorials focused on LO, notably recovering the bodies and achieving justice for the dead.

In the Christchurch memorials, official anniversaries were the largest theme, possibly because there was such wide-spread destruction and loss, with so many people affected who wished to take time to reflect. The state of national emergency that was declared following the earthquake added to its preservation in national memory and as most of the nation does not regularly deal with the consequences of the earthquake, the anniversary offered an opportunity to share in remembrance. Bodies were an early focus on the Christchurch earthquake memorial pages, particularly on personal pages when the whereabouts and condition of some people were unknown. More recent memorial pages focused on the rebuild. The minimal discussion of accountability may reflect the earthquake as a natural disaster for which no one could be held accountable. Overall, while there is some oscillation between LO and RO, Christchurch earthquake memorials displayed more restorative orientations, increasing over time.

In summary, these online disaster memorials can be usefully interpreted through Stroebe and Schut's (1999) DPM. Pages for the materially destructive earthquake more clearly focused on RO, highlighting a desire to move forward and rebuild. While both sets of memorials demonstrated an oscillation between RO and LO, pages for the killed miners emphasised LO, an orientation also identified by a journalist documenting the Pike River tragedy.

They want to fight on, for accountability and for the recovery of the men's remains, but at the same time they know that their beloved boy would say to them, 'Mum and Dad, you must try to get on and live your life'. They take some comfort from the knowledge that their son and brother does not lie alone. Together the Pike 29 remain entombed. (Macfie, 2013, p. 244)

While earthquake memorials mourned a lost city, their prime focus on a new normal suggests an overall RO, consistent with the view of historian Katie Pickles that:

the earthquakes have revived experiences of first settlement – living in temporary tents and huts, dealing with transience and uncertainty, watching homes succumbing to the environment – and forced people to emulate the pioneer spirit. The way to a new start is to reject the imperial mentality of conquering the environment, and instead to work with the surrounds. (Pickles, 2016, p. 27)

Comparing these two cases suggests that RO prevails in a situation of material destruction whereas LO prevails when there is little material loss. Of course, online memorials are only one possible index of LO and RO, but we suggest that their variety and often grassroots nature qualifies them as an index to be taken seriously.

DISCUSSION

This article explores the kinds of accounts of coping that a societally extended DPM-R could generate. We suggest that RO may not always and naturally prevail after mass material destruction. Furthermore, we identified specific factors and stressors that might influence communal RO. In the following discussion of other cases found in the literature, we conclude that RO may also occur through spontaneous collective action, but it can also be organised from above, politically manipulated, or disrupted.

Spontaneous Collective RO

The Student Volunteer Army (SVA) was a community organisation that emerged in the aftermath of the September 4th 2010 Christchurch earthquake. With the local university campus closed for safety checks, student Sam Johnson set up a Facebook page titled ‘Student base for earthquake clean up’. This invited Facebook friends to join him in assisting local residents with non-lifesaving tasks such as shovelling liquefaction (contaminated silt) that had bubbled up and cleaning debris especially for elderly residents. Over 2500 students contributed to the clean-up, leading to the creation of a new student volunteering club, the UC Student Volunteer Army (Wikipedia, 2016). “The SVA cleaned over 360,000 tonnes of liquefaction in over 75,000 volunteer working hours. The Facebook page had over 26,000 followers after March 2011 and continued to act as a platform to organise and coordinate volunteers and non-skilled labourers in Christchurch communities throughout 2011” (Student Volunteer Army, 2011). The SVA is fully orientated to restoration.

This kind of collective RO action is not unusual in a disaster’s immediate aftermath (Solnit, 2009) and may be understood in terms of anthropologist Victor Turner’s (1974) concepts of liminality and *communitas*. When a group finds itself ‘betwixt and between’, on the threshold (in Latin, *limen*, hence ‘liminality’) between one world and another, as in the immediate aftermath of a death, a temporary, extraordinary *communitas* can develop. *Communitas* is nothing like a structured community; rather, for a brief time, normal authority structures are held in abeyance, and ordinary people can initiate LO collective mourning (Walter, 1991) or restorative collective action that ordinarily would require at least authorisation and probably organisation from above. The challenges in Christchurch of co-ordinating immediate grassroots action with formal civil defence lines of command are analysed in a special issue of *The International Journal of Disaster Risk Reduction* (Kenney & Phibbs, 2014; Vallance & Carlton, 2014). An earthquake-prone country that has successfully and impressively integrated spontaneous restoration-oriented volunteering into its formal civil defence first-response system is Italy. ⁱ

In 1966, a coal tip above the Welsh mining village of Aberfan collapsed and buried the village school, killing 116 children and 28 adults; Parkes considers that the community's resilience in the aftermath built on decades of community organisation through trades unions, working men's clubs, non-conformist chapels and other political activities. Years of distrust of authority had "certainly not left them incapable of communal response" (Parkes, 1979, p. 208). If anything, too many grassroots committees sprang into action. It seems from Parkes' argument that this collective response reflected not temporary *communitas* (which surely existed) so much as the ongoing functioning of a relatively self-organising community. Parkes contrasts Aberfan with another disaster that hit a small working class community, the Buffalo Creek flood in the USA (Erikson, 1979).

Ideology as well as history can sustain community resilience. After the Christchurch earthquake, a mythology of the resilient and resourceful New Zealander countered other myths of women as disaster victims. As local women organised it became clear that the vulnerabilities generated by the disaster prompted many social innovations that filled gaps in civil defence and national disaster management protocols (McManus, 2015; McManus, Johnston, & Glavovich, 2015).

RO Organised from Above

On 11 March 2011, three weeks after the second and more deadly Christchurch earthquake, Japan's 'triple disaster'—earthquake, tsunami, and meltdown at the Fukushima nuclear plant—devastated the Tohoku region. Loss of both life and material structure was massive. Over 19,000 people died, over 2,600 were missing, nearly 6,000 people were injured and over 340,000 displaced from their homes. Over 120,000 buildings were destroyed; another 275,000 partially collapsed. Livelihoods and businesses as well as people perished overnight (Mullins & Nakano, 2016).

Soon after, an attempt by SVA leaders to transfer the Christchurch SVA concept to Japan failed (Ellingham, 2011; Mullins & Nakano, 2016). Instead, Japanese volunteers were mobilised by institutionally developed student volunteer centres. 'Following the 3.11 disaster, these centers were quickly mobilized to raise funds and organise teams of volunteers to assist with relief work focussed on cleanup and reconstruction work in the town of Otschi, on the coast of Northeastern Japan in Iwate Prefecture' (Mullins & Nakano, 2016, p. 12). The New Zealand SVA's emphasis on informality and sidestepping hierarchy was unacceptable in a Japanese culture, which stresses respecting authority and formal organisational procedures (Suter, 2016). While both countries had great waves of volunteers, New Zealand's were bottom-up while Japan's were top-down. Each worked toward immediate restoration of services; there was little space or time to attend to loss (Suter, 2016).

Manipulated Collective RO

Often, however, RO is not a natural outcome of community resilience or pre-existing organisation, but is imposed or manipulated by those in power. Holst-Warhaft (2000) has argued that, from ancient Greece to the present day, grief's potential to mobilise anger has troubled those with established power who therefore attempt to suppress the pain of grief. Focussing on restoration rather than loss or trauma may serve their interests well. Thus in the First World War, though 'shell shock' was recognised and many sufferers treated in hospital, its effects were downplayed in official propaganda and officers tried to stiffen their men's moral character and get them back into action as soon as possible. Indeed, the training of military and emergency personnel aims to create discipline, to subjugate personal feelings of

fear, loss and anxiety in favour of obedience to orders and loyalty to the group. Negative emotions are intentionally and often very effectively suppressed.

The pulling together of the citizens of British cities during the blitz of World War Two is famous. Historian Pat Jalland (2010) argues that this was neither a natural outcome of national character (the British bulldog myth) nor a stoicism learned through the years since 1914 of war, flu epidemic and economic depression, but a direct result of media manipulation. News pictures and stories of the blitz were censored by Prime Minister Winston Churchill. RO photographs of the air raid warden digging a grandmother out of the rubble of her home and handing her a cup of tea, or the milkman continuing to deliver milk in a destroyed street, were carefully selected to convince the British that they could take whatever the Luftwaffe inflicted on them *and* to convince the German command it could not bomb Britain into submission. The contrast with LO media images of disaster today, focussing on demoralised, shocked victims in tears could not be more striking. Jalland argues that media manipulation created both the image and reality of a Britain pulling together, downplaying loss and bolstering resilience and restoration. The silencing of traumatic wartime experiences suggests how effective Churchill's strategy was as it became absorbed into a "cultural unwillingness to incorporate traumatic experience into post-war remembering that prevented the individuals speaking" (Acton, 2007, p. 13).

RO can be used to promote less worthy goals, even a cynical ploy to protect vested interests. An example is the 1989 Hillsborough soccer stadium crushing disaster in England in which 94 fans died; the official (RO) response was to require stadia throughout the country to eliminate standing areas with no seating, even though this was not the cause of the disaster. The bereaved families then fought a 25 year (LO) battle to expose an extensive cover-up and to achieve official recognition of the disaster's true roots in incompetent stewarding by police on the day (Hillsborough Independent Panel, 2012).

Naomi Klein's book *The Shock Doctrine* (2007) on the rise of disaster capitalism identifies officially manipulated RO as a common, sinister and even pre-planned response to disaster. She argues that neo-liberal economic and political reforms that might be unthinkable in normal times have been driven through with little resistance after some disasters that shatter community resilience. For example the 2005 Boxing Day tsunami that swept away Sri Lankan families' homes, fishing boats, guest houses and small-scale restaurants enabled the government to effect a policy of economic development through multi-national companies building new facilities. Part-funded by the international tsunami disaster fund, this supposed economic development dispossessed local people of their homes and livelihoods. The *image* was of rebuilding, development, restoration; the reality was of further loss.

Though Klein focuses on business and right-wing politicians stepping in to capitalise on disaster, there are also examples of more socialist ideals taking root in the void after war and disaster. The introduction in the UK of the National Health Service and other components of the welfare state in the late 1940s almost certainly grew out of the years of solidarity experienced in the war (Titmuss, 1963). In Germany and Japan too, the post-war years were dominated by a public RO of rebuilding.

Limits/disruptions to Collective RO

While RO can be manipulated and imposed by authorities, conversely, authorities can unintentionally obstruct effective RO. For example, water sustainability had been a problem in Christchurch long before the 2011 earthquake but instead of using the quake as an

opportunity to drive through a modern water system, the municipality immediately struck a deal with the insurance companies in which the insurers would pay only like-for-like, thus limiting modernisation (McManus & Gallagher, 2015).

It is well known in the disaster literature that, though first responses may be effectively and quickly organised, long-term re-building can be fraught with difficulties. Entrenched bureaucracies can be cumbersome in dealing with new or different kinds of problems, with poor inter-agency co-operation (Schneider, 1995). Ill-fitting bureaucratic procedures can hamper rebuild-orientated people and organisations. Cultural translation by aid workers from other countries can hamper effective restoration; imposed and inappropriate cultures of grief, bereavement and recovery can conflict with culturally-specific death protocols (Doherty, 1999; Marcella & Christopher, 2004). After the Christchurch earthquakes, many local rescue workers unofficially ensured Māori death protocols were adhered to, even if this went against public health protocols (Herbert, 2001); water was made available for rescue workers to ritually wash their hands before and after handling materials likely to contain body-parts (Shingleton, 2012). Formal national and international disaster preparedness protocols had not factored in this cultural need.

The unplanned dispersal of disaster populations may further impede effective restoration. One key message from Erikson's study (1979) of the Buffalo Creek flood is that disasters can disperse communities. Recovering from disaster may mean moving to another area to be with extended family or to seek work. The original community disintegrates as individuals and families leave. In many transport disasters no such original community exists; mourners and survivors have to come to terms with their experiences individually.

While it is most often neighbours who rescue and care as a disaster unfolds, voluntary organisations and governments swing into action with their competing objectives and parameters. Over time, existing hierarchies of authority prevail and tensions between government and voluntary organisations emerge as rescue turns to recovery. The government rebuild strategy may conflict with the aims and objectives of the voluntary sector so crucial to disaster recovery (Bennett, Dann, Johnston, & Reynolds 2014).

While government may tread its own RO path, another disruption to effective RO is when a politically manipulated media image of RO is not accompanied by actual restoration, or restoration is plagued by corruption. After Italy's 2009 Abruzzo earthquake, for example, Berlusconi's media-savvy government promised, but did not deliver, long-term reconstruction (Özerdem & Rufini, 2013). Such limits and disruptions leave people wanting to restore, but unable to. At the same time, there may be little or no public recognition of loss when public discourse is all about restoration.

Conclusion

This article's analysis contrasting online memorial sites related to two disasters is only exploratory; it compares only two disasters, online memorials are only one possible index of LO and RO, and our analysis does not reveal the dynamic connection between individual and collective coping that Stroebe and Schut (2015) consider important to progress DPM research. But our comparison, alongside our critical discussion of certain kinds of collective restorative action, does offer insights.

We argue that our case studies and subsequent discussion indicate that the DPM illuminates collective loss after disaster. The model allows exploration of the relative

emphases given to the distinctive yet inter-related loss and restorative dimensions of collective loss in various disaster situations. In terms of our case studies and other examples, applying this model has shown how collective grieving, especially in disasters causing significant material damage, is readily skewed towards restorative orientations to the potential detriment of acknowledging collective and personal loss. It has also allowed us to identify some factors that can skew collective RO or undermine its effectiveness. These include political grand-standing, economic expediency, bureaucratic lumbering, cultural insensitivity and poor institutional coordination.

Stroebe and Schut (1999) argue that oscillation between loss and restoration characterises healthy grieving. They point out that accounts of and psychological research into individuals' grief have traditionally been skewed towards loss to the detriment of restoration; we argue that accounts of and research into collective disaster often focus on restoration to the potential detriment to collective loss. Societies facing significant collective losses such as follow disaster or political trauma may do well to strive to balance loss and restoration. Many poor communities throughout history have, in times of hardship and loss, been oriented to restoration, thus ensuring physical survival. It is modern affluent societies that allow widespread emphasis on loss (Walter, 2017). In time of war or disaster, however, even affluent communities typically revert to focusing on restoration, though this can be complicated by many factors.

If the worst predictions of climate change materialise, humankind will experience more floods and wars, hence more episodes of massive collective material loss and consequent focus on RO. Meanwhile, bereavement care, bereavement research and bereavement pressure groups focus on LO, epitomised for example in current attention to stillbirth and infant death in which emotional loss is all, and loss of material resources insignificant. Bereavement research and clinical practice are looking one way while the world is arguably heading in another. At the same time, disaster research and expertise focus on restoration rather than loss. Both may need to widen their view if humankind is to get through the next century.

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Table 1. Online memorials: Percentage distribution of types

	Pike River	Christchurch
Personal	38	60
Communal	62	40

Christchurch, N=43; Pike River N=26.

Table 2. Percentage of online memorials focussing on:

	Pike River	Christchurch
Bodies	54	25
Accountability	25	4
Anniversary	14	36
Memorials	7	14
Rebuild	0	21

Christchurch, N=43; Pike River N=26.

ⁱ <http://www.protezionecivile.gov.it/jcms/en/volontariato.wp>